

Primary Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed April 18, 2003, with a shortened statutory period for response of three (3) months, set to expire July 18, 2003.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No. 01-0528.

Please enter the following amendments.

10

IN THE CLAIMS

Please cancel, without prejudice, Claims 1 to 11, inclusive, and Claim 13.

Kindly enter new Claims 21 to 25 to read as follows:

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21. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

20 hydrotreating a petroleum distillate consisting essentially of material boiling between about 50° C. and about 425° C. by a process which includes reacting the petroleum distillate with a source of hydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst to assist by hydrogenation removal of sulfur and/or nitrogen from the hydrotreated petroleum distillate;

25 fractionating the hydrotreated petroleum distillate by distillation to provide at least one low-boiling blending component consisting of a sulfur-lean, mono-aromatic-rich fraction, and a high-boiling feedstock consisting of a sulfur-rich, mono-aromatic-lean fraction;

30 contacting at least a portion of the high-boiling feedstock with an immiscible aqueous phase comprising at least one organic peracid or precursors of organic peracid, in a liquid reaction mixture maintained

substantially free of catalytic active metals and/or active metal-containing compounds and under conditions suitable for oxidation of one or more of the sulfur-containing and/or nitrogen-containing organic compounds at temperatures in a range upward from about 50°

5 C to about 150° C;

separating at least a portion of the immiscible peracid-containing phase from the reaction mixture to recover an essentially organic phase from the reaction mixture; and

10 treating at least a portion of the recovered organic phase with a solid sorbent, an ion exchange resin, and/or a suitable immiscible liquid containing a solvent or a soluble basic chemical compound, to obtain a product containing less sulfur and/or less nitrogen than the feedstock.

22. The process according to claim 21 wherein the conditions
15 of oxidation include temperatures in a range upward from about 80° C. to about 125° C. and sufficient pressure to maintain the reaction mixture substantially in a liquid phase.

23. The process according to claim 21 further comprising
treating at least a portion of the separated peracid-containing phase to
20 remove and at least a portion of the sulfur-containing and nitrogen-containing organic compounds and water contained therein, and thereafter recycling to the reaction mixture at least a portion of the treated peracid-containing phase having a water content of less than 60 percent by volume.

25 24. The process according to claim 21 wherein the high-boiling oxidation feedstock consists essentially of material boiling between about 200° C. and about 425° C.

25. The process according to claim 21 further comprising
blending the product containing less sulfur and/or less nitrogen than
30 the oxidation feedstock with at least a portion of the blending